

**REMARKS/ARGUMENTS**

Reconsideration and withdrawal of the rejections of the application and consideration and entry of this paper are respectfully requested in view of the herein remarks, which place the application in condition for allowance.

**I. STATUS OF THE CLAIMS AND FORMAL MATTERS**

Claims 1-8, 10, 12, and 15-19 are currently pending. Claims 1-7 were previously withdrawn from this application in a response to a restriction requirement. Claims 9, 11, 13, and were cancelled in a previous response. Claim 8 is hereby amended. No new matter has been introduced. Support for this amendment is provided throughout the Specification as originally filed, for example at page 8, lines 13-26 (paragraphs [0039] of the Application published as 2009/0100911), and Fig. 2.

**II. REJECTIONS UNDER 35 U.S.C. § 103**

Claims 8, 10, 12, and 15-19 are rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 4,728,882 to Stanbro et al. (“Stanbro”) in view of U.S. Patents Nos. 4,510,436 and 5,522,980 to Hobbs et al. (“Hobbs”).

Applicant respectfully traverses for at least the following reasons.

As presently understood by Applicants, Stanbro discloses an alcohol concentration sensor comprising a pair of electrodes and “an active or concentrating layer, that has a high affinity for non-polar molecules, which...coats the two insulated conductors.” *Stanbro*, column 2, lines 21-23. The concentrating layer is “a novel feature” of the invention and is used to coat an open or planar capacitor thereby causing the formation of nucleated bubbles in the adjacent fluid medium

which includes the analyte. The nucleated bubbles cause a dramatic decrease in capacitance with an increasing analyte concentration. *Stanbro*, column 3, lines 11-16. The concentrating layer is found in all disclosed embodiments in Stanbro.

In contrast, the “novel feature” of Stanbro, the concentrating layer, is not a requirement of the presently claimed alcohol concentration detector. As shown in Figs. 2 and 3, insulating protective film 6 is provided to cover the thin film electrodes 4 and 5 and protect the electrodes from chemical attack. *Instant Specification*, page 12, lines 11-12. There is no requirement for a concentrating layer in the present invention.

Independent claim 8 recites, *inter alia*:

An alcohol concentration sensor...comprising:  
an insulating substrate...  
a pair of electrodes...  
a pair of lead-out electrodes connected respectively to the pair of electrodes; and  
a resin mold,  
wherein the connection ends of the lead-out electrodes and a part of the insulating substrate are sealed by the resin mold forming a resin-sealed body...

Accordingly, the claimed invention is directed to an alcohol concentration sensor comprising, *inter alia*, a pair of electrodes each with a lead-out electrode connected thereto, and a resin mold forming a resin-sealed body sealing the connection ends of the lead-out electrodes and a part of the insulating substrate.

The Office Action concedes that Stanbro does not teach **a pair of lead-out electrodes connected respectively to the pair of electrodes** as required by claim 8. Raymond was asserted to teach a pair of lead-out electrodes that connect each electrode to contact pads. Raymond was

also asserted to disclose a resin cover and case capable of sealing connection ends of the lead-out electrodes.

However, Applicants submit that the references, taken alone or in combination, fail to teach **a resin mold wherein connection ends of the lead-out electrodes and a part of the insulating substrate are sealed by the resin mold forming a resin-sealed body** as required by the claims.

Raymond may teach a case providing two chambers and two covers to seal the chambers within the case. *Raymond*, column 2, lines 38-45. This differs from **a resin-sealed body** as claimed in the amended claims. Raymond's case and two covers configuration offers an inferior construct because Raymond relies on seals between the case and covers to maintain the integrity of the sealed chambers.

The Office Action asserts on page 3 that the cover in Raymond "would provide increased protection to the electrodes." Applicants respectfully disagree and maintain that **a resin-sealed body** provides a superior configuration for sealing the connection ends of the lead-out electrodes as claimed. As disclosed by Raymond, the case requires two covers, one to seal each chamber. As one of ordinary skill in the art would recognize, each cover would require the formation of a seal between the case and the cover. The integrity of the seals must be maintained in order to protect the connection ends.

In contrast, an ordinarily skilled artisan would recognize that the claimed **resin-sealed body** forms a seal around the connection ends, protecting the electrodes and connection ends with no further steps. The integrity of the seal is formed with the **resin-sealed body**.

The Office Action asserts that the newly cited Hobbs reference teaches a gas sensor with conductors supported on a glass substrate and the substrate and insulating layers having similar

thicknesses as the claimed invention. Accordingly, the new reference fails to correct the deficiencies of Stanbro and Raymond.

For at least the foregoing reasons, it is believed that revised independent claim 8 patentably distinguishes over the relied upon portions of Stanbro, Raymond, and Hobbs, either alone or in combination, and is therefore allowable. Further, claims 10, 12, and 15-19, which depend from claim 8, are allowable as well.

Statements appearing above with respect to the disclosures in the cited references represent the present opinions of the Applicants' undersigned attorney and, in the event that the Examiner disagrees with any such opinions, it is respectfully requested that the Examiner specifically indicate those portions of the respective reference providing the basis for a contrary view.

**CONCLUSION**

In view of the foregoing, it is believed that the present application is in condition for allowance. Accordingly, Applicants' attorneys respectfully request that a timely Notice of Allowance be issued in this case.

Please charge any fees incurred by reason of this response and not paid herewith to Deposit Account No. 50-0320.

Respectfully submitted,  
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